

# IDEAS AT *Work*

COMPUTERS/HILLEL SEGAL

## 'Batram' device speeds business processing

What's so special about a device that promises to increase the speed of your personal computer? Not much, if it's like most add-in "turbo boards" advertised for the purpose. Such boards claim to increase the processing rate of your computer but may not improve the actual performance of common business-type programs.

This is because most business programs, such as accounting or order handling, require constant disk accesses. And hard disk storage components operate at a fixed speed, regardless of how fast the computer's central processor is running.

Enter a just-released new product called Batram made by Santa Clara Systems Inc. Instead of speeding up the processor, it dramatically speeds up your IBM PC or PC-compatible computer's hard disk.

Let me describe it further for you.

Batram consists of a box, about the size of a computer, that sits on the floor next to your desk and plugs into the back of your computer. Contained inside is enough space to house 70 megabytes of memory chips and a battery to keep the chips alive for up to two weeks in case of a power outage. Memory chips depend on a constant flow of current.

In short, it replaces your hard disk with banks of memory chips and acts as an "electronic disk" operating at a fraction of the time of a mechanical disk. The result, according to my testing, is double the performance speed of IBM's top-of-the-line model PC-AT for disk-intensive, business-type computing. Of course, the exact speed improvement you'll experience depends on the number of disk accesses used by your programs.

After using a Batram unit extensively, here is my evaluation:

✓ It's perfect for network situations. Obviously, the Batram can speed up single-user applications. But multi-user situations hold even greater promise. When many users are constantly competing for hard

disk access, response time on the whole system is often dragged down. The addition of a Batram could determine, for example, whether an already loaded multi-user system could support an extra five or six users.

✓ It's the first of a new breed.



Segal

Batram was first, but there's another alternative just over the horizon that probably will be even better — enlarging the computer's on-board addressable memory instead of plugging in an external device. That alternative probably will appear within the next few months with IBM's next PC release. One

constantly repeated prediction is that IBM's new PC will offer up to 16 MB of on-board memory, fully addressable by 286-DOS, an advanced operating system being prepared by Microsoft for IBM. Using this memory as an electronic disk will be even faster than Batram.

✓ Prices are sure to fall with competition. As it's now offered, Batram is no bargain. It costs \$1,895 with just 4 MB, and \$1,295 for each additional 4 MB. But that's still a lot less than what it may cost in a network situation to add the processing capability to support five or six more users. After IBM's release of its new system, however, the price of the Batram will probably fall in line with the price of simply adding a backup battery to an IBM system with a similar amount of memory.

In conclusion, I think the Batram device is going to be a big hit, especially in multi-user situations. And many others with single-user PCs may feel that the exceptional speed improvement is worth the cost today, even if the costs are likely to drop in the next six months.

I'll even go out on a limb and predict that Batram embodies the technology of the future — that in coming years PCs will commonly use electronic disks to increase processing speed, along with built-in batteries to protect against power outages.

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